AMENDMENTS TO THE CLAIMS

1-2. (Cancelled)

3. (Original) A single crystal substrate comprising:

a langasite substrate with a SAW propagation surface; and

input and output IDTs having electrodes on the surface for launching and/or detecting surface acoustic waves, wherein a direction of surface wave propagation is parallel to an X'-axis, and the substrate further has an Z'-axis perpendicular to the surface and a Y'-axis parallel to the surface and perpendicular to the X'-axis, the langasite substrate having a crystal orientation defined by modified axes X, Y and Z, the relative orientation of axes X', Y' and Z' being defined by Euler angles ϕ, θ and ψ, in which ϕ is 0°, θ is in a range of $12^\circ \leq \theta \leq 17^\circ$, and ψ is in a range of $73^\circ \leq \psi \leq 78^\circ$.

4. (Original) The single crystal substrate according to claim 3, wherein optimal Euler angles of the langasite are $\phi = 0^\circ$, $\theta = 14.6^\circ$ and $\psi = 76.2^\circ$.

5. (Original)A single crystal substrate comprising:

a quartz substrate with a SAW propagation surface; and

input and output IDTs having electrodes on the surface for launching and/or detecting surface acoustic waves, wherein a direction of surface wave propagation is parallel to an X'-axis, and the substrate further has an Z'-axis perpendicular to the surface and a Y'-axis parallel to the surface and perpendicular to the X'-axis, the quartz substrate having a crystal orientation defined

by modified axes X, Y and Z, the relative orientation of axes X', Y' and Z' being defined by Euler angles ϕ, θ and ψ, in which ϕ is in a range of $-5^\circ \leq \phi \leq +5^\circ$, θ is in a range of $60^\circ \leq \theta \leq 80^\circ$ and ψ is in a range of $-5^\circ \leq \psi \leq +5^\circ$.

6. (Original) The single crystal substrate according to claim 5, wherein optimal Euler angles of the quartz are $\phi = 0^\circ$, $\theta = 70.5^\circ$ and $\psi = 0^\circ$.

7. (Original) A single crystal substrate comprising:

a quartz substrate with a SAW propagation surface; and

input and output IDTs having electrodes on the surface for launching and/or detecting surface acoustic waves, wherein a direction of surface wave propagation is parallel to an X'-axis, and the substrate further has an Z'-axis perpendicular to the surface and a Y'-axis parallel to the surface and perpendicular to the X'-axis, the quartz substrate having a crystal orientation defined by modified axes X, Y and Z, the relative orientation of axes X', Y' and Z' being defined by Euler angles ϕ, θ and ψ, in which ϕ is 0°, θ is in a range of $17^\circ \leq \theta \leq 23^\circ$ and ψ is in a range of $10^\circ \leq \psi \leq 20^\circ$.

8. (Original) The single crystal substrate according to claim 7, wherein optimal Euler angles of the quartz are $\phi = 0^\circ$, $\theta = 20^\circ$ and $\psi = 13.7^\circ$.

9. (Original) A single crystal substrate comprising:

a lithium tantalate substrate with a SAW propagation surface; and

input and output IDTs having electrodes on the surface for launching and/or detecting surface acoustic waves, wherein a direction of surface wave propagation is parallel to an X'-axis, and the substrate further has an Z'-axis perpendicular to the surface and a Y'-axis parallel to the surface and perpendicular to the X'-axis, the lithium tantalate substrate having a crystal orientation defined by modified axes X, Y and Z, the relative orientation of axes X', Y' and Z' being defined by Euler angles ϕ, θ and ψ, in which ϕ is in a range of $-5^\circ \leq \phi \leq +5^\circ$, θ is in a range of $70^\circ \leq \theta \leq 90^\circ$ and ψ is in a range of $85^\circ \leq \psi \leq 95^\circ$.

10. (Original) The single crystal substrate according to claim 9, wherein optimal Euler angles of the lithium tantalate are $\phi = 0^\circ$, $\theta = 79^\circ$ and $\psi = 90^\circ$.

11. (Original) A single crystal substrate comprising:

a lithium tantalate substrate with a SAW propagation surface; and

input and output IDTs having electrodes on the surface for launching and/or detecting surface acoustic waves, wherein a direction of surface wave propagation is parallel to an X'-axis, and the substrate further has an Z'-axis perpendicular normal to the surface and a Y'-axis parallel to the surface and perpendicular to the X'-axis, the lithium tantalate substrate having a crystal orientation defined by modified axes X, Y and Z, the relative orientation of axes X', Y' and Z' being defined by Euler angles ϕ, θ and ψ, in which ϕ is in a range of $-5^\circ \leq \phi \leq +5^\circ$, θ is in a range of $160^\circ \leq \theta \leq 180^\circ$ and ψ is in a range of $85^\circ \leq \psi \leq 95^\circ$.

12. (Original) The single crystal substrate according to claim 11, wherein optimal Euler angles of the lithium tantalate are $\phi = 0^\circ$, $\theta = 168^\circ$ and $\psi = 90^\circ$.

13. (Original) A single crystal substrate comprising:

a lithium tantalate substrate with a SAW propagation surface; and

input and output IDTs having electrodes on the surface for launching and/or detecting surface acoustic waves, wherein a direction of surface wave propagation is parallel to an X'-axis, and the substrate further has an Z'-axis perpendicular to the surface and a Y'-axis parallel to the surface and perpendicular to the X'-axis, the lithium tantalate substrate having a crystal orientation defined by modified axes X, Y and Z, the relative orientation of axes X', Y' and Z' being defined by Euler angles ϕ, θ and ψ, in which ϕ is in a range of $-5^\circ \leq \phi \leq +5^\circ$, θ is in a range of $20^\circ \leq \theta \leq 40^\circ$ and ψ is in a range of $5^\circ \leq \psi \leq 25^\circ$.

14. (Original) The single crystal substrate according to claim 13, wherein optimal Euler angles of the lithium tantalate are $\phi = 0^\circ$, $\theta = 30^\circ$ and $\psi = 16.5^\circ$.

15-20. (Cancelled)